

Issue 2 First Quarter 2010

Fantastic information for the Backyard Farmer in us all

Bringing Food Production Home

Backyard Farming

Growing Bananas

Bananas are great in your backyard

Figs – An ancient fruit

Quail – a productive bird for the backyard



Smoking
your own
meats at
home



Grapes
Are simple
to grow in
the garden



Chamomile
A refreshing
herb for any
backyard

Welcome to our backyard

The first edition of the **Backyard Farming Magazine** has received a fantastic response, and here we are hot on its heels with the second edition.

The online discussion forum on the website has been a real hit with many members joining up and sharing discussions with each other. The forum really comes into its element when members help each other with

advice, swapping stories, and there's even been some swapping of seeds and plants. It's really the start of a friendly community atmosphere where members log on almost every day to say hello to each other and discuss what's been happening around their own backyards.

If you haven't already joined, drop by and have a look, join up and say hello. There's a friendly bunch of people

"It's about revisiting some of the skills we have lost in our modern society"



there who would love to say hello, and hear what you've been up to in your backyard.

Just visit the Backyard Farming website and click *forum* in the top menu.

www.backyardfarming.com.au

In this edition of the magazine we cover a wide range of subjects. There's a special article on smoking meats at home by Nigel Laubsch.

Nigel is well known for his vast experience in smoking and barbecuing meats as well as his knowledge and experience in Chilli growing and cooking. The article in this edition is based on general information with regards to smoking meats, in the next edition of the magazine we will have a specific article about how to produce bacon written by Nigel.

I hope you enjoy the second edition of our magazine, I'm looking forward to the third edition which will be packed with more information.

Joel Malcolm, Editor





Backyard Farming

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Backyard Farming Magazine is a quarterly publication which aims to promote ideas about home food production coupled with healthy and sustainable living.

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Beautiful Beans



The majority of beans that we eat come from the Americas. When Christopher Columbus first arrived in what was most likely the Bahamas, he found large bean fields cultivated by the locals. Many tribes would grow beans, maize and squash together in a symbiotic relationship.

By Johan Andrews

Beans form part of the family Fabaceae. The word 'bean' normally refers to the seed of a plant belonging to this family. Seeds are often eaten while they are unripe, hence the common name 'green beans' – which might refer to beans that are not green in colour at all.

The term bean was originally only used to refer to broad beans, but nowadays it has become an umbrella term used for the common bean, runner bean, peas, soybean, lentils, lupins, chickpea and various other leguminous crops.

HISTORY

Beans were one of the first plants to be cultivated by humans when they changed from being hunter-gatherers to domestic farmers.

Archaeologists have found remains of beans in Thailand which have been carbon-dated back to nearly 10 000 BC. Similar research revealed that the indigenous people of Mexico and Peru have been farming with beans for as long as 7000 years before Christ.

Beans were buried with the dead in ancient Egypt, to serve as food for their journey into the afterlife, as far back as 4000 years ago.

The majority of beans that we eat come from the Americas. When Christopher Columbus first arrived in what was most likely the Bahamas, he found large bean fields cultivated by the locals. Many tribes would grow beans, maize and squash together in a symbiotic relationship – each providing something that one of the other needs.

Today there are more than 4000 cultivars of beans. An interesting example of how many diverse species of beans are cultivated today is the well-known fifteen bean soup – a dish that actually contains fifteen different varieties of beans.

The three biggest bean producers in the world are currently Brazil, India and China. The United States produces less than 5% of the world's beans.

There is lingering belief in many societies that planting or eating beans on special days will bring good luck in some form. European folklore says that it will bring good luck if you plant beans on Good Friday. In the US it is supposed to bring good luck for the New Year if you serve black-eyed peas on New Year's Day. In Malta, Italy and Brazil, eating lentils on New Year's Day supposedly brings you good luck in the New Year. In Nicaragua a bowl of beans are regularly offered to newly-weds' to ensure their future happiness.

NUTRITIONAL INFORMATION

Certain types of raw beans, especially kidney beans and red beans

contain a toxic substance known as *Phytohaemagglutinin*, which can only be destroyed by cooking it for at least ten minutes. Cooking it for a short period of time could actually increase the level of toxicity. Temperatures in a slow cooker might not be sufficient to destroy these toxins, unless the beans are brought to boiling point.

Many types of beans that we eat, including soybeans and broad beans, contain a type of sugar molecule

called *oligosaccharides*. This requires a special kind of enzyme to be digested, which is not normally present in the human body. So they are rather digested by bacteria in the large intestine – which produces gases causing the flatulence many people experience after eating beans.

Soaking beans in water for a few hours before cooking will destroy most of these sugar molecules. In some countries you can also buy an enzyme that helps with digestion of oligosaccharides over the counter. This can either be added to your recipes containing beans, or taken separately. Fermented beans don't have the same problem with *oligosaccharides*.

USES

Beans can be eaten raw, cooked, sprouted, curdled into tofu, ground into flour, and fermented into soya sauce, miso or tempi. They are great in soups, chillies and salads.

In a recent study beans have been found to help lower the 'bad' cholesterol in your bloodstream. When you combine beans with grains, seeds and nuts they form a healthy, high-fibre vegetarian source of protein. Beans are also rich in Vitamin B and Iron.

If you want to reduce your fat intake, beans are the ideal food. With a fat content of between 2% and 3% they are certainly not going to send the calorie counter climbing through the roof!

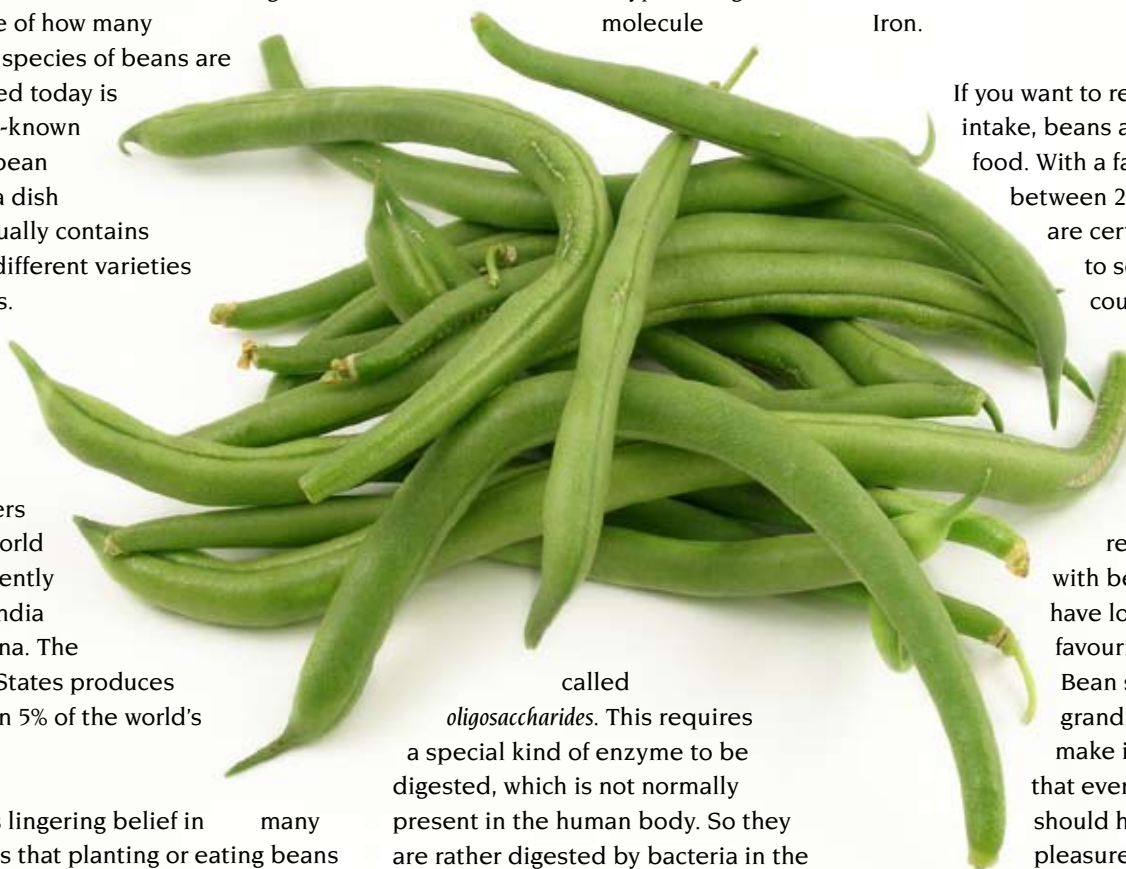
There are whole books dedicated to recipes made with beans. Beans have long been a favourite in soups. Bean stew, just like grandma used to make it, is something that every generation should have the pleasure of eating – it's not just food, its culture!

And then there are baked beans...and bean salad.

GROWING BEANS

Beans are cultivated either as a vine (climbing beans) or as a shrub (bush beans). Climbing beans need something to support them, such as a fence, pole or trellis.

Most beans benefit from being exposed to bacteria inoculants which help them extract and store atmospheric nitrogen. Most garden soils already have the bacteria, but when it is not present, it is advisable





to add it to the soil around your leguminous crops, as it stimulates growth and actually improves the soil. Most seeds are actually coated with the bacteria; typically heirloom varieties are the best seeds to choose from.

Beans do not like cold weather or

frost. You should wait at least a week or two after the last frost before planting them. The soil temperature should be at least 16°C. If you plant them in cold soil, they will simply rot. Mid to late spring is normally a good time to start growing beans. If you want to start early, you can grow them indoors for two or three weeks and

then transplant them into the garden after the last frost.

Soil should be well-fertilised, with plenty of free drainage. Beans need a lot of calcium and phosphorous (pot ash). Beans prefer a soil with a neutral pH. Soil that is too alkaline will lock up valuable nutrients and cause distorted growth, however soil that is slightly acidic will allow them to extract nutrients easily.

Prepare the soil by digging it over to a depth of 30cm. Next mix a good organic fertiliser into the soil, poultry or cow manure is ideal as this contains a wide range of slow release nutrients. Mound the prepared soil into rows before you plant the seeds. This helps to improve drainage and maintain soil temperature.

Beans love direct sunlight and will thrive in hot conditions. Climbing beans will cope with some shade, but even they should have at least six hours of sunlight per day.

A wide variety of bean seeds are available and they can be purchased easily through online seed saver groups, such as Eden seeds or the Diggers club or the Backyard Farming website. You can soak the seeds in a tea made from compost, seaweed or manure, this will provide valuable nutrients during the germination stage and help increase germination rates.

When planting bush beans, plant the seeds 5 – 7cm apart, in rows that are about 50cm from each other. If you are planting Lima beans, they should be further apart – 15cm is good.

Climbing beans need a lot more space



than the bush type. They should also be planted in slightly raised rows, but

in this case maintain about 60cm between rows and 20 to 30cm between individual plants. Provide a sturdy

“Air circulation between your plants is very important”

support such as a fence, pole or trellis. Even a row of corn will be sufficient. Traditionally climbing beans were cultivated onto a ‘wigwam’ which was a Native American lodge made from wood.

Air circulation between your plants is very important, especially if you live in an area with a lot of moisture. In such a climate diseases spread very quickly.

A layer of mulch around the plants will help to preserve moisture, prevent the soil from forming a crust and help to prevent the spread of disease from the soil to the leaves. Any organic mulch,

such as straw or sawdust, will work well – just make sure it comes from a reputable source.

The plants will take about two months to mature, but this can vary somewhat depending on which variety you planted. Once you have harvested and the plants start dying you should cut them off just above ground level. All the atmospheric nitrogen stored in their roots will then breakdown and feed the soil.

To ensure a supply of beans throughout the growing season, don’t plant them all at the same time. Plant a new batch every two to three weeks. Once the older plants die you can plant new ones in their place.

WATERING

How often you water your beans will depend on the soil type and the amount of rain in your area. Regularly check the soil around the plants. If it becomes dry and crusty, it is time to water the plants. Do not over-water them though because this will cause root rot. A good rule of thumb

is that they should get about 2.5cm of water per week (including rain water!). Once the pods start to develop, you can give them a little more water.

PESTS AND DISEASES

Beans are susceptible to a variety of diseases. Prevention is better than cure: rotate crops every year,



plant them where they get a lot of sunlight, buy only varieties that are disease resistant and keep your garden weed-free. If plants do get infected with a disease, destroy them – do not use them as compost. Give them a go, plant some beans, you won’t be sorry when this productive plant start producing it’s beautiful nutritious pods. ●

Liquid Fertiliser



If you want to steer clear of synthetic chemical fertilisers, there are some new natural liquid fertilisers, on the market, that will do the trick for your organic growing needs, especially for those of you, who grow using hydroponics or aquaponics. But for those pioneering spirits among you who want to save money, here are some tips for making your own liquid fertilisers.

The following is a recipe for making manure tea. This recipe was intended for traditional potted plants, not for hydroponics, so we'll have to make adjustments to it for hydroponic or aquaponic use. This recipe is just to get us started. And I don't recommend that you mix this recipe up in your apartment, unless you want to annoy your neighbours.

Materials for a small amount: bucket with tight lid, cloth or burlap bag, 1.5 kg fresh cow manure, water and twine. Materials for a large amount: large plastic garbage bin, cloth or burlap bag, 4 kg fresh cow manure, water and twine.

NOTE: You can also substitute horse, rabbit, chicken or sheep manure for the cow manure, or mix them in. Don't use dog or cat manure, which contain pathogens and may spread diseases.

Put the manure in the bag and then tie the bag and put it in the bucket or can. Fill the container 2/3 of the way with water. Steep this for four days, occasionally lifting, poking or stirring the bag. By this time the tea should be light brown and ready to use. You can dip the tea out as needed, replacing it

with new water and re-stirring the bag. You can reuse this manure for about a month before replacing it.

If you're using this tea for a soil-based garden, you should dilute it to one-third strength for weekly use. If it's for potted plants, dilute it to one-tenth strength for weekly use.

Manure tea is a good all-purpose fertiliser, having small amounts of nitrogen, potassium, and phosphorous, as well as a fairly complete range of trace minerals. But for hydroponics, you'll probably want to adjust the solution for various types of plants, using various additives. And for daily use you'll need to dilute it further. And remember, manure and all the materials below may vary in strength from batch to batch, so be careful when applying. ●



Freshly made compost



Liquid seaweed and fish emulsion



Wood ashes

ADDITIVES

- **Compost** is usually more nutritionally complete and less harsh than manure, and it's neutral in pH. You can substitute compost for the manure or add it to the mix. Compost is weaker than manure, and probably won't need to be diluted.
- **Wood ashes** are very high in potassium, unless they've been left out in the rain, in which case the potassium may have already leached out. They are also highly alkaline, so they can help adjust your pH balance. Since ashes cake up, they should be thoroughly mixed in with the manure or compost.
- **Bat guano** is very high in phosphorous and nitrogen. Due to its high cost, you might want to make a separate tea with it and save it for occasional use on flowering plants that need a lot of phosphorous.

The following ingredients are probably too expensive to add to the tea mix until after the tea is taken from the bucket or can. You can use them to adjust the final mix.
- **Liquid seaweed** is fairly high in nitrogen and potassium, and has a full range of trace elements.
- **Fish emulsion** is high in nitrogen and contains some phosphorous, potassium and trace elements.
- **Dried blood** is very high in nitrogen.

If you can't get the right solution for your needs, you can always buy some pre-made liquid fertilisers to add to your mix to perfect it.

Experiment a little when making your liquid fertiliser and keep a close eye on your garden to see what reactions you get from different mixes.

Your garden will love you for it.

Keeping Quail



“Quails have been bred domestically for more than four thousand years. Quails were so common in Egypt that they had their very own hieroglyph.”

By Mitchell Baylis-Raayen

The quail is a game bird and part of the family Coturnix – the same family that partridges belong to. They are in fact closely related – partridges are bigger, however, and brighter in colour. Quails are mostly coloured brown, tan or grey. Quails have a longer wing-span than partridges and are therefore stronger flyers. They are migratory birds and often fly long distances – such as between Africa and Europe.

There are over a hundred different varieties of quail – mostly in North America and Asia. All of them belong to two main groups; the Old World

Quail and the New World Quail. Old World Quails originated in the eastern hemisphere. Probably the most popular example is the Japanese quail. Most new world quails have been bred from the Japanese quail.

Quails are very friendly birds – it is this characteristic that makes them such excellent poultry to keep, even on small holdings.

HISTORY

Quails have been bred domestically for more than four thousand years. It is widely believed that many of the quails we breed with today evolved

from the Chinese quail. Records of quails dating back to 770 BC have been found in the Far East.

Egyptians so highly valued the quail as a source of protein that they established dedicated quail farms, to breed and grow quail. Quails were in fact so common in Egypt that they had their very own hieroglyph in the Egyptian language!

WHY QUAILS?

Quails are grown for both their eggs and meat. The eggs are best described as small speckled pearls and typically weigh about ten grams each. When compared to a chickens' egg which

usually weighs seventy-five grams, they are very small. However, the eggs are highly sort after and are considered a delicacy in many countries.

They contain three times the amount of vitamin B1, as chicken eggs, and twice as much vitamin A and B2. And to top it off, quail eggs contain five times as much iron and potassium, and are richer in phosphorous and calcium, than chicken eggs. They are widely considered one of the best dietary foods, and not just because of all the vitamins and minerals, but also because they contain no 'bad' cholesterol (LDL), only 'good' cholesterol (HDL).

They also have one of the highest feed conversion ratios of 2:1, which rivals that of almost all other land animals. Their meat is considered a delicacy in some countries. It is high in proteins, and provides an abundant source of vitamins and minerals. Plus the meat is incredibly flavoursome and very tender – especially if you grow it yourself.

HEALTH BENEFITS

Quail eggs have many benefits, which is why they are so often considered a health food. One of the most notable benefits is that they have anticancer properties. Overall quail eggs strengthen the body and organs, prolong life and restore valuable nutrients and vitamins. They are one of the worlds' wonder foods.



Roasted Whole Quail

HEALTH BENEFITS OF QUAIL EGGS

- Remedy digestive tract disorders, such as, gastritis and ulcers
- Help cure anaemia and rid the body of heavy metals and toxins
- Help treat tuberculosis, asthma and diabetes
- Have strong anti-cancer properties and may help inhibit cancerous growth
- Alleviate and remove stones from the kidney, liver and gall bladder
- Strengthen heart muscles and blood cells
- Promote good memory and enhance brain function
- Strengthen the immune system and slow down aging
- Improve skin colour and hair strength

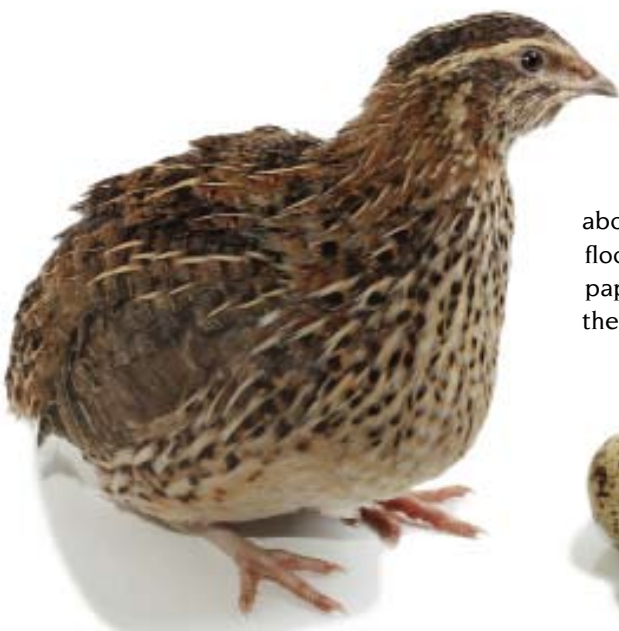
LOOKING AFTER YOUR QUAILS

Raising quails yourself requires some careful planning on your part. For the first five weeks of their life, you should keep them in a cardboard box with an electric light as a source of heat. Use a box about 70 cm x 70 cm and cover the floor with wood shavings or shredded paper – a slippery floor will cause the quail to fall off balance. Place the box in a warm room free from drafts.

Initially hang the

light bulb about five centimetres from the base of the box. You can easily check whether the box is too hot or too cold by watching the behaviour of the quails. If they huddle under the lamp they are too cold. If they try to get as far away from it as possible, they are too hot. Adjust the heat by replacing the bulb with a weaker or stronger one or by changing the height of the bulb.

Quail are very small in the initial stages of their life, typically about 28 mm when they first hatch. They are therefore very fragile at this stage and need to be looked after with great care. Place their food and water about fifteen to twenty centimetres from the lamp to start off with – you can move it later on





Unlike chickens and ducks, quail must be kept in cages or enclosures. Free range situations are not an option, as predators such as crows, cats, magpies and even chickens will undoubtedly prey on the small birds. Quail can also fly away, and will fly straight up if startled.

Quail can be kept in chicken tractors or aviaries. Ideally they should be kept in an enclosure that allows them to forage on grasses and insects. This is their natural diet and when fed on natural food they will produce eggs and meat of a superior quality.

The cage should also have an area that is protected from the sun, rain and wind. Although they are not messy birds at all, you should still make sure that their cage and their food and water containers are cleaned regularly. Once a week is a good idea.

if needed. For the first five weeks feed them on chick starter crumbs. After five weeks change to quail breeder pellets or poultry layer mash.

Make sure their water container is not too deep. Drowning is a major cause of death for quail that are bred in captivity. Young hatchlings can drown in as little as 6 mm of water.

Once the quail are six weeks old you can put them into a larger enclosure. The enclosure should contain some form of bedding where they can sleep and lay eggs. Wood shavings are ideal. It is not a good idea to use straw, as it may be infested with lice that can be transferred to the birds. Hay will get dirty very easily and could also become infected with spores if it became damp.

Check the quails regularly for any sign of disease. Once a week is again a good average. By doing this, they will become accustomed to being handled by humans and this will make it easier to harvest eggs and meat, in the future.

Each quail can lay between 250 and 300 eggs every year. To ensure a continuous supply of fresh eggs,

feed laying birds on a high protein feed. Normal chicken pellets do not contain enough protein and should be mixed with meat meal or soybeans to increase the protein content. It is also a good idea to mix in some shell grit into their food.

BREEDING QUAILS

Quails will begin to lay eggs at six weeks. To achieve this, the birds must be exposed to indirect sunlight, the more light they receive the more eggs they will produce. To encourage the males to breed with the females lengthen the daylight hours anywhere from ten to sixteen hours, is ideal. Make sure it is indirect light as direct sunlight can cause quail to go a little bit crazy.

However if you are growing quail for meat, it is better to limit the light so that they spend more time gaining weight.

Hatching quail is easy. Ideally you should use an incubator to hatch the eggs - this is more reliable than letting the mother hatch the eggs. Quail eggs will start to develop within three days of being set. To check the fertility of the eggs simply hold them up to a bright light or candle and look through the egg. You should be able to see a young quail starting to form. If the egg has not developed at all in the first three days, it should be discarded.

Transfer the eggs back to the incubator, with upmost care, as



they are incredibly fragile at this stage. The incubator should be set at 37°C, with a relative humidity of 65%. As the eggs develop, they begin to produce energy of their own and as such the eggs should be turned three times daily. Care should be taken to ensure the eggs do not over heat, which will cause them to crack and spoil. Quail

By all means do feed them leftover pasta, rice, cake, lettuce and sweet-corn. If they don't like it, they will immediately let you know, so you will soon get familiar with their tastes!

Water should always be kept clean. Regularly make sure that their drinking water does not freeze over, in the

about thirty seconds or so. After this time remove the birds from the water and the feathers should come away with ease.

The flight feathers can be pulled from the wings easily. To remove the remaining feathers use your thumb and forefinger to pinch and pull the feathers from the carcass. Dunk the bird in cool water to remove any stubborn feathers. As you de-feather each bird, place them into a container filled with an ice slurry. This will help keep the birds fresh and also keep them away from flies. Once all the birds have been de-feathered we need to remove the internal organs.

“Unlike Chickens and ducks, quail must be kept in cages or enclosures.”

eggs will typically hatch in twenty-two to thirty days.

Young chicks that struggle to break open their shells should not be assisted. These chicks will grow into weak quail and will not produce as much meat or eggs.

DIETARY REQUIREMENTS

Quails are quite happy to eat chicken food – it will therefore not break the bank to feed them. The females should be fed additional calcium – after laying as many as 300 eggs in a single year anyone will need extra calcium! Larger breeds, like Japanese, Italian and Cortunix will cope with mixed corn and layer pellets, but you should crush the pellets to make them easier to eat. During winter you can give them some meat-meal or soybeans as a source of extra protein.

It will do no harm to feed your quails scraps from the kitchen. In this regard there are some do's and don'ts to remember:

Do not feed them meat.

Do not feed them cuttings from the garden.

Do not give them salty or highly processed foods.

cooler months. A good idea is to add some apple cider vinegar to the water now and again. This will help to improve their feather condition and ward against worms and similar parasites.

BUTCHERING

Processing quail for their meat is very simple. It is a good idea to setup a butchering station if you are going to be regularly harvesting quail for meat as this greatly speeds up the process. Firstly select a quail, grasping it in one hand, firmly. Then use kitchen scissors or a sharp knife to remove the head, try to do this in one short sharp blow, rather than sawing through slowly. Put the dead bird into a bucket or container and place a lid over the top, this will limit muscle spasms and stop blood being splattered everywhere. The bird will struggle violently for a short period, but don't be alarmed - the bird is already dead.

Next we need to remove all the feathers from the birds. To do this, place the dead birds into a bucket of hot water, around about 65°C. This is a fantastic way to loosen the feathers from the body of the quail.

Grasp two or three birds with one hand and hold them in the bucket of hot water, vigorously agitating them to loosen the feathers. This should take

Firstly cut the neck off clean with the shoulders, using a pair of kitchen scissors or a sharp knife. Then remove both legs, just below the knee joint. Make a small incision in the vent, then using your thumb, draw back the skin on the breasts and remove the fat from the neck area.

Next remove the gizzards and guts from the quail by pushing your forefinger into the vent incision and dragging the contents from the carcass. Then remove the remaining organs from the body, the heart and kidneys are a common delicacy in some countries and can be kept for later consumption.

Finally clean the bird by flushing the cavity with cool water and place the cleaned carcass into a bucket of fresh ice slurry. The birds can then be prepared for meals.

CONCLUSION

Quail are a fantastic bird to keep in the backyard. They are relatively quiet, incredibly productive, and most of all, they produce an abundance of high quality meat and eggs. Quail are a must have for any backyard farming enthusiast! ●

Going Bananas Over bananas

By Joel Malcolm



Bananas form part of the family Musaceae. The actual word banana is derived from the Arab word banan, meaning 'finger'. The banana plant can grow up to 7.5 m tall with large, wide leaves, up to 60 cm wide and 2.7 m long. This makes the banana the largest of all non-woody flowering plants. What is interesting to note is that the banana is not a tree at all, but in fact the world's largest herb!

Although the majority of bananas are yellow, there are also varieties that are purple and red. Dessert bananas are mostly eaten raw. The variety called plantain is firmer and has lower sugar content than dessert bananas. They are therefore mostly used for cooking.

The average weight of a banana is 125g, but this varies widely between harvests and varieties. In the tropics they are often much larger.

While people in developed countries normally eat the inside of the fruit and throw away the skin, many Asian cultures eat both the skin and inside in cooked form.

HISTORY

Bananas originally grew wild in areas of Malaysia, Indonesia, New Guinea and the Philippines. The latest research from New Guinea indicates that bananas were cultivated there as early as 8000 BC. In Malaysia bananas have also been cultivated for thousands of years.

From South East Asia bananas soon spread to India, where they were discussed in the Buddhist Pali writings during the 6th century BC. It was also in India that Alexander the Great tasted bananas for the first time,

around 327 BC. He is indeed often given credit with introducing bananas to the rest of the world.

By 200 AD the Chinese had many banana plantations in the South of China. Bananas were believed to be rare and exotic fruits and it wasn't until the 20th century that they became popular among the general population.

Islamic warriors involved in the slave trade brought bananas with them when they travelled to Africa. In 650 AD bananas are thought to have arrived in Madagascar, off the South-East coast of Africa. From there the slave trade led to the gradual spread of bananas to Guinea on the West Coast of Africa.

"A single banana contains as much as 600mg of potassium."

Portugal was of course a major seafaring nation during the 15th century and it's no surprise therefore that their explorers subsequently brought bananas from Africa to the Canary Islands in 1402. A little more than 100 years later, banana rootstocks were taken from the Canary Islands to the Caribbean by another Portuguese explorer, Tomas de Berlanga. From there it soon spread to the rest of the Caribbean and also to Central America.

The banana is a relative newcomer to the United States. Many people are surprised to hear that the first bananas were only eaten in the US in 1876. This was in Pennsylvania, during the 100th anniversary of the declaration of independence.

NUTRITION

Bananas are very high in potassium.



The potassium content is in fact so high that doctors often recommend a banana diet for patients suffering from potassium deficiency. A single large banana contains as much as 600 mg of potassium.

They also have a high fibre and low sodium content. People who want to reduce the amount of sodium in their diets will therefore do well to make bananas part of a balanced diet. A large banana contains only 36 g of carbohydrates.

When it comes to vitamins and minerals bananas don't have to stand

back for any other fruit either. Their Vitamin A content is one of the highest of all fruits. They also contain the full range of Vitamin B as well as 14 mg of Vitamin C. As far as minerals go, bananas are a source of calcium, magnesium, iron and zinc.

USES

The fruit of the sweet dessert banana is often eaten raw as a snack in many countries. Banana based desserts are very popular all over the world. A banana split is certainly one of America's favourite desserts. It made its appearance for the first time in 1904 and by the 1920s it was very popular throughout the country.

No backpacker who has ever travelled through Asia will be unfamiliar with the famous banana pancakes that one gets throughout the region. So ubiquitous is the banana pancake in the area that the expression the 'Pancake Trail' has been coined to describe the places where you will find tourists munching on this delicious dessert.

Bananas can also be fried with batter – this is quite popular in Singapore, Malaysia and Indonesia. They can be deep fried or baked in their skin. Banana fritters are a delicacy in many countries. And plantain bananas are especially great

for curries and stews, or to be baked or mashed. You can even make banana jam. And if you travel to Burma, you can bring an offering to Buddha in the form of a large green coconut surrounded by green Bananas.

Banana leaves can be used as a wrapping to grill or steam food, often fish. And a plate made from banana leaves is a stylish, bio-degradable alternative that doesn't need to be washed afterwards!

The flowers of the banana plant are eaten raw or steamed with dips in many South East Asian countries. In these countries they are also cooked in stews and soups. They taste somewhat like artichokes.

GROWING BANANAS

Fruits of the wild banana have a number of large, hard seeds. However many modern cultivars of bananas are seedless and therefore have to be cultivated by different means. This is normally done by using offshoots from the parent plant. The plant can develop two offshoots at the same time, a large one that will develop fruit first and then a smaller one that will produce fruit later on.

The banana plant takes about nine months to mature and to start producing bananas. Below the ground, at the base of the plant, you will find a large rootstalk called the corm. This rootstalk has growing points from which new offshoots will develop. These rootstalks (suckers) can be removed together with a few smaller roots and transplanted. The best offshoots to plant are the ones with smallish, spear-shaped leaves.

You need the right climate to grow bananas. This is not something you should grow high in the Alps or in a semi-desert area. Bananas will withstand heat or cold for a while, but not for long periods of time. Frost will

BANANAS FLOURISH WITH

- Dark, productive soil that is rich in nutrients and humus
- Large amounts of organic matter and mulch. Too much is never too much for a banana!
- A lot of potassium and nitrogen. A good source of this is chicken manure.
- Stable temperatures. Not extremely hot, neither extremely cold.
- Sufficient moisture in the ground and in the air.
- Shelter, preferably provided by other banana plants.

THEY AREN'T HAPPY WITH

- Very cold or very humid conditions. Below 14 degree C they will stop growing completely.
- Strong winds
- Insufficient nutrients in the soil.
- Not enough water in the soil or in the air.
- Exposure to extreme elements.

also kill the part of the plant that is above the ground, although the roots may survive.

The perfect climate to grow bananas is between 26°C and 30°C.

The plants need a lot of water and humidity. The huge leaves lose large quantities of water through evaporation, which means that in hot weather you need to water your plants regularly to maintain humidity, up to three times a day for maximum health and productivity.

Prepare the soil well. Before planting bananas make sure the soil is treated with lots of compost and chicken manure. Some ash for additional potassium will not do any harm either. They prefer slightly acidic soil with a pH level between 5.5 and 6.5.

Spacing the plants is very important.

Do not plant them in single rows or even as single plants. Rather plant them in double rows. If you don't have a lot of space, you can even plant a number of them together and then plant something on the outside to protect them against the elements.

Keep the new plants moist during the first couple of days, but do not give them too much water as they may drown. Remember: they don't have large leaves yet, so they won't lose a lot of water through evaporation.

CARING FOR THE PLANTS

Lack of sufficient water is probably the main reason why banana plants die. Make sure they have enough water and enough nutrients in the soil and that they are protected against strong winds and excessive heat or cold. Generous amounts of mulching will help to keep the soil moist.

Remove dead leaves from time to time and if a plant should die cut it down. These leaves and dead plants can be used as mulch or compost for the other plants.

If you apply fertiliser, apply it close to the stems, bananas don't have a large root system.

HARVESTING

Once the bananas have been harvested, the mother plant will die. At this stage you should cut it and use the dead plant material as mulch. Bananas can be peeled and then frozen, or you can split them in half lengthwise and then dry them.

Bananas are one of the world's most productive crops and are incredibly versatile. If your climate permits, they are definitely a great plant to grow in your garden. ●



Banana Muffins

Why grow your own?



No.	Produce	Percentage of samples tested with detectable pesticides	Maximum number of pesticides found on a sample
1	Peaches	96.6%	9
2	Apples	93.6%	9
3	Sweet capsicum	81.5%	11
4	Celery	94.1%	9
5	Nectarines	97.3%	7
6	Strawberries	92.3%	8
7	Cherries	91.4%	7
8	Lettuce	68.2%	9
9	Grapes, imported	84.2%	8
10	Pears	86.2%	6
11	Spinach	70.0%	6
12	Potatoes	81.0%	4
13	Carrots	81.7%	6
14	Green beans	67.6%	6
15	Chillies	55.0%	6
16	Cucumbers	72.5%	6
17	Raspberries	47.9%	6
18	Plums	74.0%	4
19	Oranges	85.1%	4
20	Grapes, domestic	60.5%	7
21	Cauliflower	84.6%	5
22	Tangerines	66.7%	3
23	Mushrooms	60.2%	5
24	Rock melon	53.3%	4
25	Lemons	55.6%	5
26	Honeydew melon	59.2%	4
27	Grapefruit	62.9%	4
28	Winter squash	41.3%	5
29	Tomatoes	46.9%	5
30	Sweet potatoes	58.4%	3
31	Watermelons	38.5%	4
32	Blueberries	27.5%	4
33	Papaya	23.5%	4
34	Eggplant	23.4%	4
35	Broccoli	28.1%	3
36	Cabbage	17.9%	3
37	Bananas	41.7%	2
38	Kiwi fruit	15.3%	3
39	Asparagus	6.7%	2
40	Sweet peas, frozen	22.9%	2
41	Mangoes	7.1%	2
42	Pineapples	7.7%	2
43	Sweetcorn, frozen	3.8%	1
44	Avocados	1.4%	1
45	Onions	0.2%	1

Why do I grow my own fruit and vegetables wherever possible? Well there are many reasons and one of the main incentives is the personal satisfaction that I get from watching the fruits and vegetables grow, then harvesting the fresh produce before preparing and eating it.

Another reason why I grow my own is because when you grow it yourself, you know what has gone into it. Organic fruit and vegetables are still fairly expensive to buy and other commercially grown fruit and vegetables can be laced with harmful pesticides. Just check this list of pesticide residues found on common fruit and vegetables. I found these statistics quite alarming.

To think that over 95% of peaches tested had pesticide still on them even after being washed ready for eating, and at least one sample had nine different pesticides present.

This information has really put me off eating peaches this summer, however, I think I'll plant a peach tree. •

A recent study by the Environmental Working Group examined over 50,000 test results from the USDA and the FDA. The USDA and FDA performed the tests for pesticide residues on fruits and vegetables between 2000 and 2005. The testing and data took into consideration how produce is typically washed and prepared before consumption.

Chamomile, from the Greek word chamaimelon, meaning 'Apple on the ground', is a well known plant that resembles daisies. With a host of medicinal properties and a wide range of uses in modern scientific and homeopathic remedies, it certainly has a variety of applications. The most common *Matricaria recutita* is native to Europe and Asia. Another popular variety, known as Roman chamomile, *Anthemis nobilis*, has many similarities, but also quite a few differences.

German chamomile, *Matricaria recutita*, is a self-sowing annual plant that can grow as tall as one metre. Roman chamomile is a perennial that grows up to thirty centimetres, and can really enliven your garden. It is aesthetically pleasing growing along garden paths or between stepping stones. It is then in a great position to appreciate its aromatic apple-like scent, from which chamomile gets its name. It can occasionally be used on entire lawns and can be mown like grass.

HISTORY

Chamomile is one of the oldest ingredients in traditional herbal recipes. Its story traces back to antediluvian times. The Egyptians are the first to have been recorded using it. They believed it was a sacred gift from their sun god, Ra, and placed it higher in importance than all other herbs. It was used in medicine, embalming and even graced the faces of Egyptian noblewomen in cosmetics.

Greek and Roman physicians prescribed chamomile for headaches as well as a host of other bodily problems including: liver, kidney and bladder issues and fevers. An old Anglo-Saxon manuscript, 'Lacnunga', names chamomile as a treatment for insomnia, flatulence, indigestion, rheumatism and gout. The Vikings used it to shine their long blonde hair. It was also believed to bring good luck.

It was most probably introduced to North America in the sixteenth century; the US now imports over 450 tonnes of chamomile a year.

WONDER HERB

The herb gained popularity with the people of the past as a medicinal wonder-herb. Medieval Germans called it 'Alles Zutraut', which translates to 'capable of

everything fixer upper'. Nicholas Culpeper, a seventeenth century herbalist, claimed that it could help with digestive problems, fevers, jaundice, and kidney stones.

In modern society, chamomile has three main uses: as an anti-inflammatory for the skin, an anti-infective for a plethora of maladies and for cramps and muscular pains. Externally, grinding the flowers into a paste and applying to rashes

Calming Chamomile

By Doug Blake



and burns can help soothe pain and irritation - in particular, itching from bites can be calmed by application of the paste. Bathing in water containing the

“Chamomile prefers light, dry soil with a neutral pH”

crushed flowers can help ease cystitis and haemorrhoids.

From health to beauty, chamomile can be used as a conditioning shampoo and also to add golden highlights to darker hair, similar to what the aforementioned

Vikings used it for.

GROWING CONDITIONS

Chamomile prefers light, dry soil with a neutral pH. Chamomile is one of the few plants that do well in relatively poor soil - just ensure that it is well drained as chamomile hate wet roots.

It isn't ideal for chamomile to be grown in containers, so choose a location that suits your garden best. Chamomile should receive partial if not full sunlight, as the seeds need sunlight to properly germinate and grow. The plant does well on lawns and paths, making an attractive addition to any garden.

Since chamomile is susceptible to mildew, you'll want to choose a location that receives a light breeze this will inhibit the onset and growth of mildew.

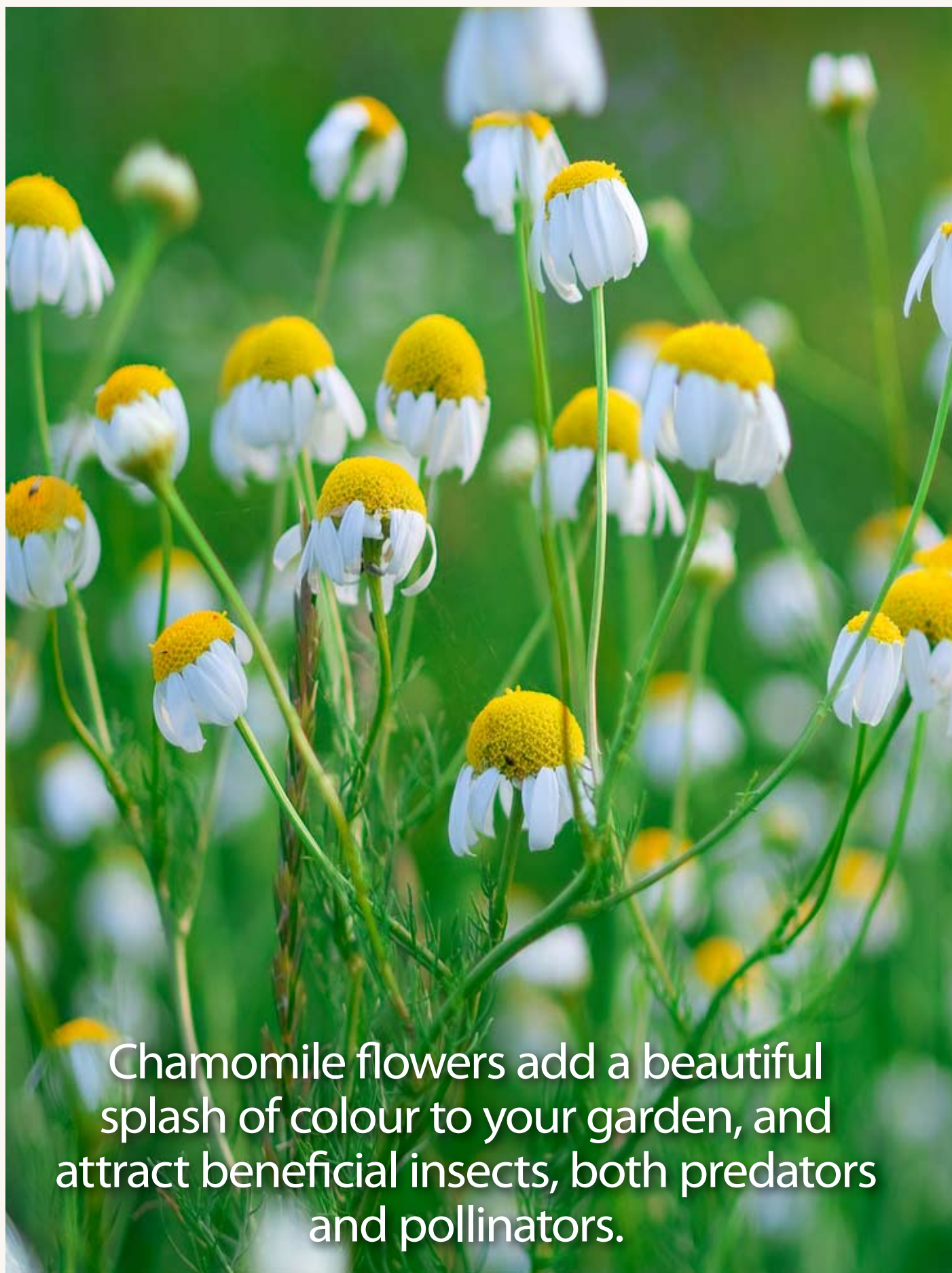
PLANTING

Chamomile should be planted at the beginning of spring, after the last frosts disappear. Sowing is simple: place the seeds 1 cm deep, 15 cm apart in well fertilised soil. This produces a carpet-like effect. If you are planting the chamomile for a herb garden, consider planting them further apart; 45 cm is good. Make small depressions for the seeds placement and cover the soil around them. Water the whole patch when finished.

The seeds should germinate within ten days. Transplant the seedlings if necessary. Place a layer of mulch around the base of the plants, to promote moisture retention and also suppress weeds.

MAINTENANCE

Water the plants daily using a fine mist or



Chamomile flowers add a beautiful splash of colour to your garden, and attract beneficial insects, both predators and pollinators.

spray. Ensure that the soil is kept moist, especially through summer months.

In general, chamomile is a fairly low-maintenance plant but it will respond greatly to fertiliser. Spread garden compost in and around the plant beds to encourage sprawling growth. Do this every four to six weeks for the best effect.

The taller varieties of chamomile are susceptible to damage in strong winds. To prevent damage to the plant it may be necessary to install supports to keep the stem firm and upright.

Faded and wilting flowers should be removed. This will promote new growth and also prevent the plant from looking woody and old. On the whole the plant should undergo regular trimming as old or dying flowers will not fall off, they simply fade on the plant. Perennial chamomile should be cut back about 10 cm after flowering, as this will encourage a burst of new growth. Annual chamomile can be torn out entirely and replanted.

Chamomile can also cause problems for itself as it has a crown-like, compact stem system. The plants should be divided

every three years. Division is vital in preventing root rot, in mature plants.

PESTS AND DISEASES

The major pests and diseases are aphids and ambrosia, which can easily remedied by hosing the young plants down with a strong stream of water. In serious cases some insecticidal soup is also beneficial.

HARVESTING AND STORAGE

Harvesting should begin once the plant is fully grown and flowering. The best time to harvest is mid to late morning,

when the flowers have opened and the dew has evaporated. This means that the freshly picked flowers will be dry, free of moisture.

Begin by gently shaking the plant to get rid of weeds, pests and debris that may be attached. If you wish to maintain the plant, pinch off the flower heads or remove the flowers just beneath the heads. This stimulates new growth. Another method of harvesting is to cut 10 cm down from the flower. This gives your flower heads enough stem for you to hang up and dry.

Keep the chamomile in a warm, dry place, out of sunlight. Moisture will cause flowers to go mouldy. Dark and warm is the best, such as in a closet. If you harvested longer stems, you can tie them to string and hang to dry, speeding up the process.

Altogether, chamomile is a highly useful flowering herb, and it is well worth investing the time it takes to plant and look after it. No matter whether you choose the German or Roman variety, chamomile will add spice and beauty to your garden. ●

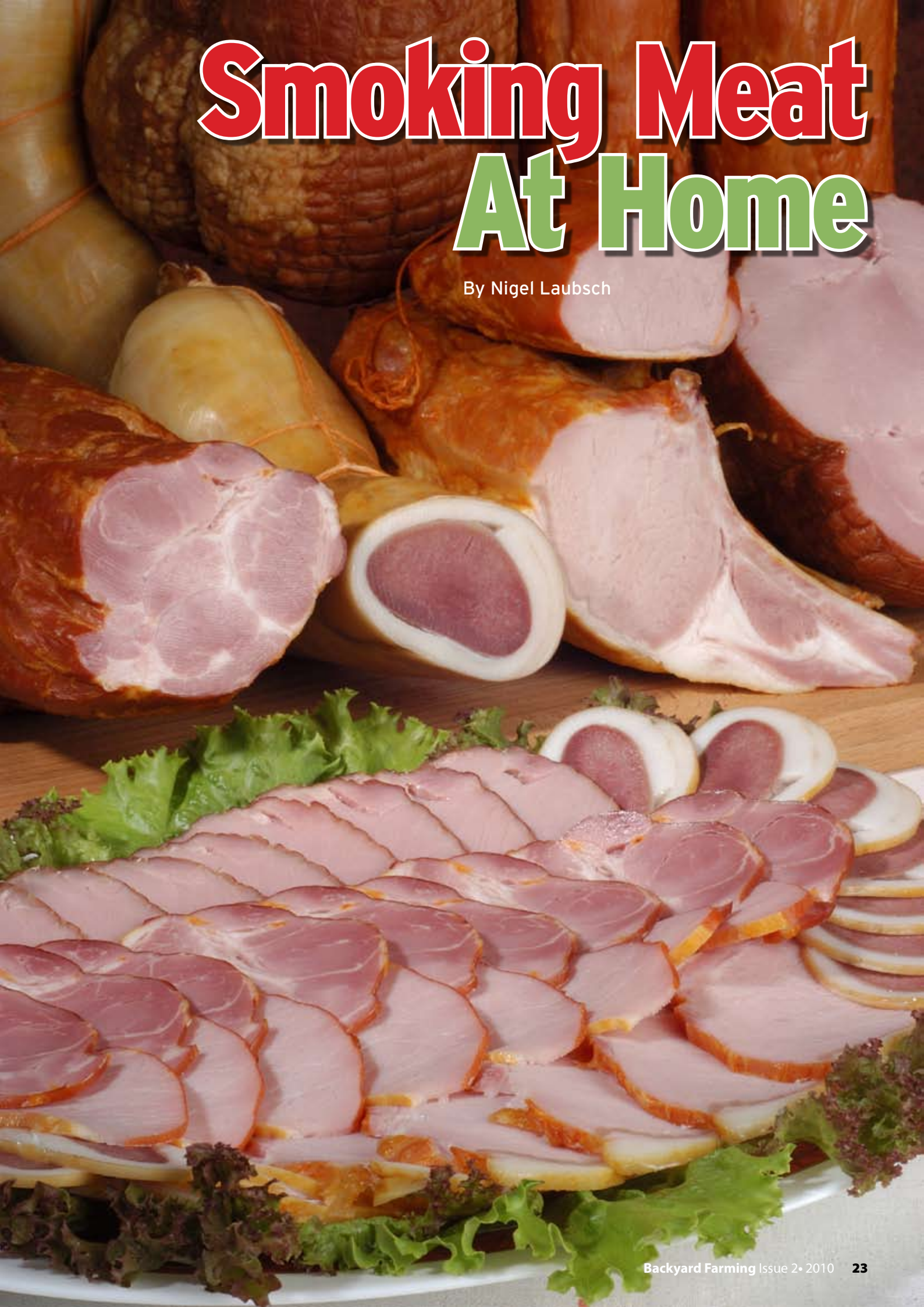
“Faded and wilting flowers should be removed. This will promote new growth.”

USES FOR CHAMOMILE

- Add one tablespoon of the dried flowers to a cup of hot, boiling water to brew chamomile tea, which relaxes and calms the body. Do not use too many flowers as it can cause drowsiness and has the effect of a mild sedative.
- Boil a pan or pot of water and add a handful or two of the dry flowers. Allow the steam and vapours to clear out your nasal passages, relieve sinusitis, calm and relax the body. Soak a face towel in the same water and drape the damp cloth over your face to relieve puffiness and cleanse impurities.
- The dainty flowers serve as a great decoration to cakes and other iced desserts.
- Place the chamomile heads into a bag made from cheesecloth or muslin and soak in warm or boiling water. Apply this directly to sunburn, bites or rashes to relieve itching and irritation.
- In the garden, planting your chamomile near onions, cabbage and wheat is beneficial to crop yield and repels certain insects, especially the flying type. Peppermint benefits from chamomile growing nearby as it is meant to enhance the peppermint oils.
- Chamomile is a flowering plant that attracts birds, bees and butterflies.

Smoking Meat At Home

By Nigel Laubsch





Old wooden smoker filled with bacon and sausages



Offset-smoker/bbq in use

Most of us have at some time or another eaten a smoked food product such as smoked salmon, kippers, smoked chicken, bacon, and I could go on. Even non-meat products are not excluded, for example smokehouse almonds.

Smoking food as a way of cooking and preserving it has most likely been around for only slightly less time than we have been using fire for cooking. Written historical records clearly show that both the Mesopotamians and Chinese were preserving food this way well over 3,500 years ago. The ancient Egyptians, and I suspect the Chinese as well, were known to be using the technique back in 2,700 BC !

So, as the above suggests, it's a tried and true way of preserving/cooking food and, within certain boundaries, you don't need any special equipment either. It's highly likely that you already have everything you need to get started.

In this first article I'll explore the basics of smoking all types of meat rather than providing step-by-step instructions, due to space restrictions – hopefully those will appear in later articles.

First we'll have a quick look at the three broad categories of smoking that are basically delineated by the temperature at which the process occurs and then we'll go through the steps involved in making it happen.

HOT SMOKING

As the name suggests this is the hottest, and therefore the fastest, of the three and is best described as "cooking with smoke present". The food to be cooked is directly above a heat source which also causes the smoke fuel (wood shavings, small chips, or pellets). Temperatures for this technique are generally above 80°C, except for large cuts when I prefer the smoker temperature to sit around 90°C. The meat is then cooked/smoked until the internal temperature reaches the desired temperature.

INTERMEDIATE SMOKING

As the name implies, this occurs at the mid range of temperatures, 40-80°C (104-176°F), and is sometimes called pit-roasting, barbecuing (USA), or smoke-roasting.

I tend to use this style the most for my



BBQ Spare-ribs, smoked chicken and,

when I can get one, pork shoulder for pulled pork. This may take from 4-12 hours to do depending on the temperature and the cut of meat – but the result is always tender, juicy, slow cooked/smoked meat.

COLD SMOKING

Cold smoking occurs at temperatures less than 38°C (100°F) and is difficult to achieve without the proper equipment. Simple implementations can be made at home with some effort. This is the zone in which smoked salmon, kippers, etc are made and it is important to remember that this process does not cook the meat but simply coats it in smoke deposits which have some limited preservative qualities due to their acidity. Smoking meat will not preserve it in the same manner as drying or salting.

MEAT SELECTION

Like anything else, there are different types and grades of meat and while you may be tempted to purchase that half price brisket or pork shoulder it is best to make sure it passes the test before deciding to take it home:

- Select cuts of beef that are bright red for best flavour with no splotches of grey or brown
 - All meats should be firm to the touch, not soft and mushy
 - No meats should have an unpleasant odour
- My preference is for free range chicken, turkey, or pork and for grass-fed beef, however these can be difficult to obtain, and dearer, and are not necessary for a good finished product.

THE HEAT SOURCE

This is something that new smokers get frustrated with, not necessarily the building of the fire as most of us are pretty good at that, but the maintaining. Maintaining a consistent temperature in that smoker is something that only comes with experience and frustrates many beginners.

The first, and single biggest factor in a constant temperature, is to use a good fuel. If your system is gas or electric then you won't have any problems, but I think you're missing out on a lot of flavour. However, the best way to smoke food is to use lump charcoal as your fuel. It's simple, it's clean and adds a great depth of flavour to the end product.

You can use heat beads though I tend to prefer not too primarily because I don't know what's really in them, besides some charcoal. I do use them when I am doing a very long smoke (>8 hours) as, while they burn cooler than charcoal, they also burn longer, and having some of them burning

along with my charcoal makes it easier to

regulate the temperature over the long period of time.

I use a charcoal chimney to light my fuel as it gives success every time, something I don't always achieve simply piling the charcoal over the little paraffin fire-starter cube. It also guarantees that all the charcoal is lit rather than just a few pieces.

Usually there is a water pan that sits somewhere in the smoker and while you may think this is to keep the meat



Large smoking cabinet filled with fish

moist, it's primary function is to help regulate the temperature inside the smoker. Water boils at 100°C (21°F) and as the water gets hot and begins to boil it starts putting off steam which mixes with the air in the smoker and naturally strives to regulate the ambient temperature in the smoker to its own temperature. Just as ice in a glass of water tries to bring the temperature of the liquid down to a much colder state like itself.

Some smokers like to put various liquids in the water pan such as apple juice, wine, seasonings, etc which they believe influences the taste of the meat. I'm not yet convinced that it really works, but hey, try it for yourself and make your own decision.

PREPARING THE MEAT

Brining is a process in which you add salt and sugar and other flavourings to

"Marinating serves as the best way to tenderise and flavour most meats"

a bucket of water. You place the meat down in the water and the salt and sugar open up the protein strings and, the salt, sugar, and flavourings are drawn deep into the meat along with the water. The result is a significantly more moist, tasty piece of meat.

I usually only brine poultry, fish and sometimes pork chops, but feel free to try it on other cuts. It is my opinion that tougher cuts of meat like brisket do not benefit from brining.

For me, marinating serves as the best

way to tenderise and flavour most meats, particularly the tougher cuts.

I like to use pineapple juice, beer, orange juice, wines, lemon juice and even cola to help marinade and flavour the meat – whatever takes my fancy on the day. Marinating is one of those things that you just have to experiment with to find your perfect combination.

Finally there's rubbing. A rub is a dry, or near dry, mixture of spices, herbs and other flavourings that is rubbed onto the meat and then left to sit to allow the flavour to be absorbed. Essentially it's a dry marinade.

THE SMOKE

The next selection you need to make is what wood you are going to use – this is important as it certainly affects the final flavour. Generally speaking any



Once you start smoking meats you'll want to try different cuts and sausages

wood that is hard and free of resin (or sap) is good for making smoke. If the tree makes fruit or nuts you enjoy eating then the wood is typically good for smoking. Some wood, of course make better smoke than others. Woods like apple have a mellow flavour and won't give you much in a short amount of time but if you're cooking for a while then it has time to add that mellow flavour without overpowering the food. Woods like mesquite are very strong and while it gives you a good flavour quickly that flavour will become bitter fast so don't use too much or for too long.

If you haven't used a wood before, start small, and build up from there with how much you use. Some smokers use sawdust or shavings, others use pellets, however, the most commonly used is chunks of wood that range up to about 50mm cubes. Chunks must be soaked in water for about an hour before use, otherwise they will simply burn, rather than smoulder. When putting a handful of wet chunks onto the charcoal I try to ensure that I

get a range of sizes so that all my smoke doesn't get produced all at once, but is spread over time – you'll get a better result that way.

COOKING THE MEAT

This is of course a question that inevitably comes up fairly frequently, unfortunately is one that results in the very unsatisfying reply, "It depends".

So, I will give you a few of the main cuts of meat that you may be starting out with, and my take on the ideal temperatures for pulling the meat out of the smoker.

Finally, as with many other things in life, smoked foods should be enjoyed in moderation. Smoke is composed of many wonderful compounds, but some harmful ones too. ●



Smoking chicken and fish in a smoking kettle

Brisket (Rolled Roast), Pork Shoulder, Pork Butt.

For Slicing: internal meat temp - 76°C (170°F)

For Pulling: internal meat temp - 92°C (197°F)

Visual Clues: Outside of meat will be very dark, will look burnt

Note: The pork shoulder and pork butt are excellent cuts of meat for beginners since these cuts are extremely forgiving. You can overcook or undercook within certain limits and the meat will still be very tasty and of good texture.

Spare Ribs

At their best when pulled out of the smoker at 78°C (172°F)

Visual Clues: Watch for meat to be pulling back from the bone ends

A rack of ribs will normally require around 6 hours to cook and become tender as the meat and collagen holding the ribs together is quite tough, though incredibly flavour-some.

Chicken, Turkey

Poultry should be pulled from the smoker when the temperature in the thickest part of the thigh reaches 72°C (162°F).

Visual Clues: Skin will be golden brown and also legs be very loose and flexible – you can "shake hands" with the bird.

A chicken will normally be done in 4+ hours in an 80°C smoker. The 5 kg turkey I cooked at Christmas took 7 hours at about that same temperature and was moist and tender throughout, un-brined.



Fun Facts

"It is difficult to place a monetary value on the many vital services that trees provide. However, the California Department of Forestry and Fire Protection calculates that a single tree that lives for fifty years will contribute service worth nearly \$200,000 (in 1994 dollars) to the community during its lifetime.

This includes providing oxygen (\$31,250), recycling water and regulating humidity (\$37,000), controlling air pollution (\$62,500), producing protein (\$2,500), providing shelter for wildlife (\$31,250), and controlling land erosion and fertilising the soil (\$31,250)."

Now that's just an ornamental tree, consider the increased benefits of a highly productive fruit tree.

A research project in Australia, entitled "The Congruent Garden: an Investigation into the Role of the Domestic Garden in Satisfying Fundamental Human Needs," interviewed gardeners on the values of gardening in their everyday lives. The researcher, Mike Steven, established that gardens have the potential to satisfy nine basic human needs (subsistence, protection, affection, understanding, participation, leisure, creation, identity, freedom) across four existential states (being, having, doing and interacting.)

Mike Steven, Lecturer in Landscape Studies, University of Western Sydney, Australia

It has taken biologists some 230 years to identify and describe three quarters of a million insects; if there are indeed at least thirty million, as Erwin (Terry Erwin, the Smithsonian Institute) estimates, then, working as they have in the past, insect taxonomists have ten thousand years of employment ahead of them. Ghilean Prance, director of the Botanical Gardens in Kew, estimates that a complete list of plants in the Americas would occupy taxonomists for four centuries, again working at historical rates.

Richard Leakey and Roger Lewin, The Sixth Extinction, p. 122

Pick up a pinecone and count the spiral rows of scales. You may find eight spirals winding up to the left and 13 spirals winding up to the right, or 13 left and 21 right spirals, or other pairs of numbers. The striking fact is that these pairs of numbers are adjacent numbers in the famous Fibonacci series: 1, 1, 2, 3, 5, 8, 13, 21... Here, each term is the sum of the previous two terms. The phenomenon is well known and called phyllotaxis. Many are the

efforts of biologists to understand why pinecones, sunflowers, and many other plants exhibit this remarkable pattern.

Stuart Kauffman, At Home in the Universe, p. 151

The unmulched garden looks to me like some naked thing which for one reason or another would be better off with a few clothes on.

Ruth Stout

An agricultural adage says the tiny animals that live below the surface of a healthy pasture weigh more than the cows grazing above it. In a catalogue selling composting equipment I read that two handfuls of healthy soil contain more living organisms than there are people on the

earth. What these beings are and what they can be doing is difficult to even begin to comprehend, but it helps to realize that even though they are many, they work as one.

Carol Williams Bringing a Garden to Life, 1998

The USDA reports that animals in the US meat industry produce 61 million tons of waste each year, which is 130 times the volume of human waste - or five tons for every US citizen.

United States Department of Agriculture





Grapes

By Wayne Bradley

Grapes contain a large amount of vitamins A, B1, B2, B6 and C. They also contain vitamins E and K and lots of necessary minerals: calcium, phosphorus, potassium, silicon, copper, iron, fluorine, chlorine, sulphur, manganese and magnesium.

When I was a kid, I loved the fact that my dad grew grapes, but the grapes themselves were secondary. Sure, the grapes tasted great, but what I really loved was climbing around on the grape barber or trellis.

Picking grapes was the one chore I didn't mind, especially when the grapes were for jelly, jam or a dessert. I don't remember my parents ever making wine. Being strong Christians, they hardly ever drank wine. The irony is that wine might not even exist today if not for the Christian religion.

Yes, wine existed long before the Christian religion. It's believed

that wine originated at least 8000 years ago, when grapes were first cultivated. It was the ancient Greeks who first turned wine-making into a serious practice, and the Romans who refined wine-making into an art. But when the Roman civilisation declined after 400 AD, it was the Church, particularly the Benedictine and Cistercian abbeys of Germany and France that kept the use of wine alive, because wine was necessary in order to celebrate mass.

USES

My father raised grapes because he liked to eat them. Imagine that! I don't blame him; to this day, I eat raisins nearly every day in my cereal.

GRAPES ARE A NATURAL CLEANSER OF THE BODY AND KNOWN TO BE BENEFICIAL FOR:

- **Blood.** Grapes improve blood circulation and help reduce blood clotting.
- **Inflammation.** Grapes reduce swelling from rheumatism, gout and asthma.
- **Arteries.** Grapes scrub the arteries, reversing atherosclerosis.
- **Bladder.** Grapes clean the bladder of stones and waste, and improve the flow of urine and bile.
- **Cancer.** Grapes help prevent cancer, due to their antioxidants, particularly caffeic acid.
- **Bowels.** Grapes clear the bowels.
- **Eyes.** Grapes improve vision and help prevent night blindness and retinal disorders.
- **Fever.** Grapes reduce fever and relieve fatigue.
- **Heart.** Grapes tone the heart and normalise heart palpitations.
- **Digestion.** Grapes reduce indigestion.
- **Mouth and throat.** Grapes clear infections in the mouth and throat.
- **Headaches.** Grapes reduce headaches, including migraines.
- **Liver.** Grapes stimulate the liver, helping to detoxify the body.
- **Skin.** Grapes reduce acne.
- **Kidney.** Grape juice helps to clean the kidneys and to pass kidney stones.

Caution: People with a history of calcium oxalate kidney stones shouldn't eat the Concord variety of grapes or drink Concord grape juice, because Concord grapes contain high levels of oxalates. Also, because all grapes contain glucose, a fast-releasing sugar, grapes are a food with a high glycaemic index. For most people, this is a health benefit. But people who are hypoglycaemic or diabetic need to be aware of the glucose.

Not only do I love the taste of raisins, but I also know how good they are for me.

Grapes also provide a lot of other health-promoting nutrients like flavonol anti-oxidants, resveratrol, tannin, beta-carotene, lycopene and other phytonutrients. Now, that's a mouthful.

CULTIVATION

Grapes are relatively easy to grow, but you'll need to determine what varieties grow in your area. There are many varieties of grapes, some much more hardy than others. Check for the varieties that have been successfully grown in your area. You'll also need to choose a variety that suits your needs. Some grapes are best for eating, while others are best for making wine.

In order to ripen, grapes need full

sunlight and fairly high temperatures, so if you live in the southern hemisphere you should plant them on the north side of your property. Avoid planting grapes in low pockets where frost and standing water accumulate. Grapes aren't very particular about the type of soil they grow in, except that it should be deep, well-drained and not too alkaline. They prefer a

soil pH of between 5.0 and 6.0.

Though you can plant grapes in mid-to-late autumn, they usually do best if you plant them in the spring. Only use plants that have well-developed root systems. Trim any roots that are broken or excessively long, and remove all canes except for the most vigorous one. Prune the remaining cane so





that only two buds remain.

Space the plants 2-3 metres apart. Dig holes that are deep and wide enough to spread the root systems without bending the roots. Plant them at the same depth as they were in the pot, leaving a slight depression around the stalk for water to accumulate. Two weeks after planting, fertilise with a high-nitrogen fertiliser, preferably an organic one. Keep chemical fertilisers fifteen centimetres away from the trunk. Avoid chemical fertilisers that contain herbicides, such as lawn fertilisers. Once grapes are established they don't need a lot of fertiliser.

Water young grape plants consistently, keeping them moist but not flooded. Once the plants become established they need little if any watering, depending upon your climate. Wetting of the fruit promotes rotting. Keeping the plants mulched helps preserve moisture, but in some climates it can also delay ripening of the fruit because it can cool the soil too much. If you live in a cold climate, you should mulch the plants heavily in late autumn, piling the mulch up around the base of the trunk. Because grapes have side roots that run just below the surface, you shouldn't cultivate deeply.

You can let first-year

growth trail onto the ground as it wants to, but before the first winter you should train the vines to climb. You can tie the vines to a trellis, a wall, an arbour or to horizontal wires. Yes, as much as it pains me to admit it, it's possible to grow grapes without a grape barber. One easy method of training is to string wires between posts, with one wire at about 60 centimetres high and the second at about 165 centimetres. Some varieties may prefer different heights than these. If you plant your grapes in rows that run east-west, they'll get better sun.

New plants normally take three years before they begin to produce fruit, and five or six years before they reach full production.

You should prune the plants very early in the spring, when the plants are dormant and the danger of severe cold weather has passed. Year-old growth is the best yielder of fruit, so you should prune as much

old wood as you can, in order to encourage new growth near the main part of the vine. Cut out about 90% of the branches that produced fruit the previous year, leaving a new, year-old arm near the main trunk.

Some varieties of grapes need to be pruned a different



way for best results, so research the variety you buy to see if it requires special pruning.

You can “layer” grapes to produce new plants. To do this, bury part of a low-growing vine under about 5 centimetres of moist soil. When this section takes root, cut it from the vine and transplant it.

You can also take cuttings from dormant grape vines, either in late fall or in early spring. Cut them at a 45 degree angle. The cuttings should be three nodes long, leaving a node at each end and another in the middle. Plant them right away, right side up, the end that was closest to the base of the main vine needs to go into the ground. Plant the cutting to a depth just above

the middle node. The two buried nodes will soon send out roots. Don't let the cuttings dry out at any time until they're well-rooted. You might consider planting cuttings in your greenhouse or garden, where you can pamper them and let them develop good roots. And then you can transplant them the second year into a permanent location.

Grapes are subject to far less damage from insects and diseases than other fruits. Check for your local pests and diseases and apply the appropriate precautions. Birds can cause problems, so you might need to put netting over the maturing grapes.

You should wait until the

grapes are fully ripe before picking them, because they don't ripen off the vine. Colour often isn't a reliable measure of ripeness. You want them at their maximum sweetness. They'll keep well on the vine if you don't get to them right away. However, prolonged wet weather can rot the fruit, and the fruit normally will stop ripening when the temperature consistently falls below 10° C. When you're picking grapes, beware of bees that might be eating the inside of a grape.

You can store grapes for months on trays, if you keep them in a humid cellar at about 5° C. But at our house, we never had to bother with storing grapes! •



Grapes on the vine

Meat Facts

Now I love eating meat as much as the next carnivore, but it's wise to keep some of the following facts in mind when choosing your diet. Growing your own food in your backyard isn't just good for your health, it helps the whole world.

Number of human beings who could be fed by the grain and soybeans eaten by U.S. livestock: 1,300,000,000

Percentage of corn grown in United States eaten by human beings: 20

Percentage of corn grown in United States eaten by livestock: 80

Percentage of protein wasted by cycling grain through livestock: 90

Percentage of oats grown in United States eaten by livestock: 95

Percentage of carbohydrate wasted by cycling grain through livestock: 99

Percentage of dietary fibre wasted by

cycling grain through livestock: 100

How frequently a child dies of starvation: Every 2 seconds

Pounds of potatoes that can be grown on 1 acre of land: 20,000

Pounds of beef that can be produced on 1 acre of land: 165

Percentage of U.S. agricultural land used to produce beef: 56

Pounds of grain and soybeans needed to produce 1 pound of feedlot beef: 16

Pounds of protein fed to chickens to produce 1 pound of protein as chicken flesh: 5 pounds

Pounds of protein fed to pigs to produce 1 pound of protein as pork: 7.5 pounds

Number of children who starve to death every day: 40,000

Number of pure vegetarians who can be fed on the amount of land needed to feed 1 person consuming meat-based diet: 20

Number of people who will starve to death this year: 60,000,000

Number of people who could be adequately fed by the grain saved if Americans reduced their intake of meat by 10%: 60,000,000

Figs

Known as the “Tree of life “
by the ancient Egyptians.

By Faye Arcaro

Ficus carica, more widely known as the Common Fig, is a tree that is both attractive and useful. A large, deciduous shrub with greyish bark and large leaves, most gardeners have come across the fig tree at some point in their lives. Producing a desirably sweet and fleshy fruit, the fig tree creates a constant source of good food for snacking and desserts.

Growing as tall as thirty metres in some cases (although it is usually pruned so it remains less than ten metres), the fig is an appealing tree to cultivate and grow. As it grows taller, the branches intertwine and spread, remaining muscular and springy except where there has been infection or disease. The sap of the tree is milky and can be an irritant to open skin. Fig trees can live to be very old – some fig trees have been recorded to have reached an age of one hundred years and older!

THE FIGS' JOURNEY THROUGH THE AGES

Thought to be indigenous to Western Asia, the fig is now grown internationally in locations all across the world. It prefers Mediterranean climates, however. One of the oldest fruit known to man, the fig tree featured prominently in biblical stories, with some scholars even maintaining that Eve ate a fig rather than an apple. It is still used by many in the Jewish celebration of Passover. Stone tablets from Sumeria, as old as

4500 years, mention the use of figs. The fig tree was thought to be a sign of fertility and abundance.

Because of the natural sweet flavour of the fig, they were in the past often used as sweeteners in place of sugar. Several countries in Africa and the Middle East still continue to use them for the same purpose. They were usually cooked to bring out the natural sweetness. Figs were and are also used as a natural laxative and diarrhetic.

It was the Phoenicians and the Greeks who were most likely responsible for the spread of the fig in ancient times. The Greeks greatly prized the figs fruit and leaves and many of their mythologies and legends tell us this. It was so important to the Greeks that the fig trees' fruit and foliage were bestowed as an honour, more specifically to the winning athletes, who were crowned in a garland of fig leaves and given the fruit to eat.

It was the Spanish who first introduced figs to the Americas in the early sixteenth century, where it soon spread throughout the region. Today

it is widely cultivated across North and South America.

MEDICINAL AND HEALTH BENEFITS

Much as the people of the past used figs for their health, so do many people today. Figs are a great benefit nutritionally, to a well balanced diet. They have a high, calcium content (more than nearly any other fruit) and contain plenty of fibre, owing to the large number of seeds contained within the fleshy fruit. They fulfil your recommended daily intake of a variety of vitamins and minerals such as, copper, iron, manganese, potassium and vitamin K. All of these are vital to maintain healthy bodily functions.

As noted before, figs have a strong laxative effect and can be used in detoxification diets. High in antioxidants, figs help to slow down ageing and promote a longer life.

A SWEET TREAT

Figs have a remarkably sweet and tender taste, and a soft and fleshy texture. This makes them a very useful and interesting addition to many dishes and snacks. See the following page for some ideas on how to use figs.

Now that your mouth is watering, you should be motivated to go ahead and plant your first fig tree!

LOCATION

Before planting a fig tree, it is worth noting that these trees can grow very large and produce plenty of shade for all plants beneath. Obviously, planting one next to plants requiring a lot of sunlight is therefore a big no. To produce good figs, the tree requires full exposure to sunlight, all day.

If your garden is small, the fig tree is

most probably not the tree for you. The roots spread out far beyond the canopy and will invade neighbouring garden beds. These roots can be cut back without harming the tree, but a large garden is generally best, with plenty of space for growth.

For locations with cooler winters, grow the fig near a light coloured wall, where reflected sunlight will warm the tree and make it less susceptible to damage from the cold.

SOIL

Figs appreciate most soil types. The earth should, however, be well drained. Sites in which water pooling occurs, more than a day after rain or watering, should be avoided. This pooling will prevent the plants roots from receiving oxygen, and the growth and development of the fig will be stunted; occasionally this flooding results in death.

The best acidity is at a pH between 6.0 and 6.5 on the scale.

Figs can tolerate relatively high salt levels; as such, figs can be

grown near brackish waters, in coastal areas.

PLANTING

The usual method of propagation with figs is by using cuttings. Cuttings fifteen to thirty centimetres in length with a diameter of less than two centimetres are preferable. The wood at the base should be about two years old. One-year old twigs with two-year old bases are also suitable. Cuttings should be dipped in a rooting hormone and allowed to callus in a warm moist place for about seven days. They should then be planted twenty centimetres apart in unfertilised, well-drained soil, with only one or two buds above the soil line.

Figs should be planted in early spring, while they are still dormant. Mulching the surface of the soil around the fig is a good idea to prevent weeds from growing and to retain moisture.



Ideas for eating figs

- Figs go very well with fresh goats' cheese - just as the ancient Greeks would have eaten them. Serve fresh, sliced figs with goats' cheese crumbled over and a drizzle of honey for a perfect starter or dessert, your choice.
- Slip some fig into salads to sweeten them a little and add an interesting new element. Again, if you can find a way to mix in some goats' cheese, go for it.
- Figs are excellent preserved or dried.
- Prosciutto and Parma ham, mixed with figs, are also stunning additions to a snack platter. This, well presented, is a great dish to have at a dinner party or wedding as it is the perfect finger food.
- The enzymes in figs breakdown proteins. This means they can be used as an effective meat tenderiser, as well as adding a sweet and exotic flavour to your roast.



Figs, Parma Ham and Mozzarella

Care should be taken when transplanting young plants, as disturbances may kill them.

MAINTENANCE

Fertilising of the fig tree should be done annually, but in highly fertile soil this is not necessary. Over-fertilisation will cause a lower yield of good, ripe fruit.

Fig trees should be watered every three to five days, depending on the soil – more for sandier soil, less for the loamier blend. Be sure not to over-water the roots, as this will cause them to rot.

Pruning is not very important and very little is needed for maintaining and training the growth of a fig. Younger fig trees should be pruned back lightly to allow for more growth and development. It is not as important in the older mature trees, although branches interfering with growth as well as dead or dying plant tissue should be removed.

Figs are a target of nematodes and thus planted next to walls will

benefit the tree by allowing its roots to escape underground. Birds cause a lot of damage to the nutritious fruit. Remove dead and fallen fruit from the garden and ensure that the fig isn't grown near citrus trees.

Sunburned branches and trunks are susceptible to fig canker, a bacterium which causes massive damage to the tree. Prevent this by whitewashing any exposed branches or trunks. Burst fruit, or fruit producing a mucus-like

secretion are probably infected with Endosepsis or Aspergillus rot. This can only be remedied by destroying the year's crop, destroy neighbouring wild trees and applying appropriate organic insecticide.

HARVESTING AND STORAGE

Do not pick the figs until they have ripened fully as they will not ripen once they have been picked. To tell if the fig is ripe, squeeze it lightly. If it is soft and the neck of the fig is beginning to bend, they are ready to be picked. Do not squeeze too hard as this will cause bruising.

For the same reason figs should be harvested with care. Since the fresh

figs only last 2-3 days, they should either be eaten immediately or dried. Dry for four to five days in the sun, or twelve hours in a fruit dehydrator. Dried figs make an excellent

snack and some varieties actually taste better when dried. These can be stored for up to eight months, although they can be infected by various bacteria and should be checked for discolouring or mould.

Fig trees aren't difficult to maintain. They just need to receive sufficient water and be periodically monitored for disease and pests. Obtaining professional help when faced with a particular problem is highly recommended. ●

"Figs can have a strong laxative effect and can be used in detox diets"



The Duopoly

The big two in Australia.

Did you know that two single companies control over 70% of all grocery sales within Australia?

A recent segment on the ABC's Hungry Beast program put together a rather disturbing set of figures about the two big supermarket chains in Australia, Woolworths and Coles.

Together the two companies turned over 100 billion dollars in 2009. Now although they concentrate their efforts through the supermarket chains where most people buy their groceries. Woolworths and Coles (Westfarmers) own a wide range of other chains and stores between them. Big W, Bi-lo, Kmart, Bunnings, Office works, Target, Tandy, Dick Smith, Pick n Pay, Harris Technology and Danks are just some of the stores owned by the big two.

They also own a range of Bottle shops and large liquor outlets, 1st Choice, Vintage Cellars, Liquorland, Woolworths Liquor, Dan Murphy's and BWS stores.

And it's just not bottle shops they also have stakes in a wide range of pubs and clubs. Woolworths has a 75% stake in 270 pubs and clubs, while Coles is close behind with 91. Woolworths operates about 10,000 pokey machines within these pubs and clubs.

The two companies also sell fuel through deals with the fuel giants, and Coles/Westfarmers owns a number of coal mines in different states.

Together they share over 70% of the grocery market within Australia. To give you an idea of perspective with these figures, the UK's two biggest grocery stores Tesco and Sainsbury's share about 48% of the UK market, while in the US, the two biggest grocery chains Kroger and Walmart have only about 20% of the grocery market between them.

The two big companies control the market in a number of ways, they gradually buy out competitors one business at a time, they also buy land that competing companies may want, then leave the land vacant. This is a tactic known as greenfield acquisitions.

In 2008 an ACCC (Australian Competition and Consumer Commission) inquiry found that there were over 700 deals made by Woolies and Coles called Restrictive Covenants. These deals were made with shopping malls to keep out rival competitors.

In their continuing strive to increase profits they don't only squeeze their competitors but they also squeeze their suppliers. The National Farmers Federation claims that farmers are only getting about 5% of what you pay at the checkout.

Since 2000 grocery prices at the big two have increased about 41% which is 8% higher than the OECD average. Yet they spend millions marketing themselves as caring businesses trying to help us out.

So how is all of this relevant to Backyard Farming? More than you can imagine, because by growing your own food you're not supporting these companies and increasing their profits. This in turn means that you empower yourself through securing your own food sources. At the very least, if you don't have room to grow some of your own food, at least try to shop at a small independent supermarket, or better still buy at a local farmers market there are many around most cities. •

Facts and Figures - Hungry Beast
hungrybeast.abc.net.au

Coq Au Vin

A Traditional French Dish.

The most simple translation of “Coq au vin” is rooster and wine, or chicken and wine. The origins of this French dish are lost in time and there are many theories as to how it came about. Some of these theories include grand stories of Napoleon and Caesar within different regions of France. But, there’s no proof to back these stories and the reality of the matter is probably something quite a bit more simple.

The dish is well over 400 years old, and back in those days nothing was wasted. Old Roosters or Coqs that were getting past their prime were still a valuable source of meat although harder and more stringy than a young chicken. Cooking the meat slowly in wine softens the meat and makes it more palatable. As such, the dish was considered “peasant food”, eaten only by those who couldn’t afford young tender chickens or better cuts of meat to eat. So although the dish is rather popular now all around the world, this has only been since the 20th century. And in fact now it is considered fine French cuisine, even though just a short while ago it’s origins lay in the

poor areas of rural France

Being a peasant dish eaten in many areas of France, you can imagine that there are many variations in the ingredients used depending on what area you live, and what you had available. Of course now the dish is considered “fine cuisine”, there are many who consider that there are certain essential ingredients, and certain ways it must be done.

Some recipes call for red wine, which is usually the standard, however white wine is also used in many areas, and even preferred by some. Always use a wine that you would drink, don’t cut corners and use rubbish wine.

Ingredients

*1kg chicken pieces
100g pancetta or bacon
12 small pickling onions
200g small mushrooms
2 medium carrots
2-3 cloves garlic
1 bottle light red wine
1 cup chicken stock
2 tbsp olive oil
1 tbsp butter
3 parsley stalks
3 sprigs of thyme
2 fresh bay leaves*

Method

Heat a heavy pan, or casserole dish and add the olive oil and butter. Let the butter foam but not burn, then add the small onions and cook for about 3-4 minutes. As the onions colour up add the pancetta or bacon and cook over a medium heat until the pancetta browns.

Now add the finely chopped garlic and cook for a few more minutes being careful not to cook the garlic for too long.

Remove the pancetta and vegetables and put to one side, keeping the fat left in the pan.

Now add the mushrooms to the pan

Take your chicken pieces and pat them dry with a cloth or paper towel. Turn the heat up on the pan, and as the fats get hot add the chicken pieces. Brown the chicken pieces well on all sides, you may need to brown the chicken in a couple of batches if your pan is too small, removing the chicken pieces as they are cooked.

Now comes the fun part, the bottom of the pan should have a nice layer of goo left over from the cooking so far, with still a little of the fat left in it. Now place the mushrooms and sliced carrots into the pan and gently brown for a few minutes. Place the chicken pieces, vegetables and pancetta back into the pan, add the herbs, slowly pour in the wine and add a little salt and pepper to taste. Gently bring the

mix to a slow simmer before covering and placing in a warm oven. The oven only needs to be about 150 degrees, remember we want a slow cook. You want to see it just bubble, you don't want a violent boil.

Check the dish every 15 minutes or so and cook for an hour and a half to two hours.

Serve over boiled or mashed potatoes, or with chunks of crusty bread and relive the rustic charm of rural France the way the peasant folk did for hundreds of years.

OK, the picture below is nothing to do with the recipe, it's just beautiful French countryside to set the mood. ●

